

**Abstract**

The present invention provides a process for an industrial scale extraction and purification of xanthophylls (e.g., lutein and zeaxanthin) from plant material (e.g., alfalfa or other leafy green crops having high levels of chlorophyll). The  
5 process involves harvesting lutein rich alfalfa, extracting an oleoresin from the alfalfa leaves, saponifying the oleoresin, extracting and extracting lutein using a series of solvent extractions specific for oleoresin obtained from alfalfa or other leafy green plants.